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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,392	08/01/2003	William C. Lincoln	279.360US2	2819
21186	7590	10/11/2006	EXAMINER	
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402			EVANISKO, GEORGE ROBERT	
		ART UNIT		PAPER NUMBER
		3762		

DATE MAILED: 10/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/633,392	LINCOLN ET AL
Examiner	Art Unit	
George R. Evanisko	3762	

## ***Office Action Summary***

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1)  Responsive to communication(s) filed on 01 August 2003.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4)  Claim(s) 1-21 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) 16-21 is/are allowed.

6)  Claim(s) 1-9 and 15 is/are rejected.

7)  Claim(s) 10-14 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 8/1/03.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_ .  
5)  Notice of Informal Patent Application  
6)  Other: \_\_\_\_\_ .

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6-9 are vague since they depend from claim 4 and claim 4 uses “at least one” of removal of the baseline or taking the derivative. If the removal of the baseline is the only function chosen in claim 4 then there will be no derivative. It is suggested to positively recite in claims 6-9 that the derivative is being taken of the acceleration signal.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Bakels et al (6223082). Bakels discusses the use of LMAVD, the time interval between the left atrial sense

to mitral valve closure, during different AV intervals to find the optimum AV interval (e.g. columns 8 and 9).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bakels in view of Baumann et al (5836987). Bakels discloses the claimed invention except for the accelerometer to detect mitral valve closure and highpass filtering, removal of a baseline component, and lowpass filtering of the acceleration signal. Baumann teaches that it is known to use an accelerometer to detect mitral valve closure and to highpass filter, rectify, and lowpass filter the acceleration signal and therefore remove a baseline component of the acceleration signal to provide a conventional, easy to implement sensor to detect mitral valve closure and the filtering to identify specific event features and remove noise and baseline components. It would

have been obvious to one having ordinary skill in the art at the time the invention was made to modify the implantable system and method as taught by Bakels, with the use of an accelerometer to detect mitral valve closure and to highpass filter, rectify, and lowpass filter the acceleration signal and therefore remove a baseline component of the acceleration signal as taught by Baumann, since such a modification would provide an implantable system and method with an accelerometer to detect mitral valve closure to provide a conventional, easy to implement sensor to detect mitral valve closure and to highpass filter, rectify, and lowpass filter the acceleration signal and therefore remove a baseline component of the acceleration signal to identify specific event features and remove noise and baseline components. Regarding claims 6-9, since claim 4 was chosen to remove baseline components, claims 6-9 do not contain any limitations since the derivate has not been taken.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bakels in view of Baumann as applied to claim1 above. Bakels in view of Baumann disclose the claimed invention except for the communication of the selected AV delay to an external location. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the implantable system and method as taught by Bakels in view of Baumann, with the communication of the selected AV delay to an external location since it was known in the art that implantable systems and methods communicate information, such as a selected AV delay, to an external location to allow the physician to double check the selected values to ensure proper therapy is delivered to the patient.

***Allowable Subject Matter***

Claims 10-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 16-21 are allowed.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Salo is another example of an accelerometer to detect mitral valve closure and using highpass filtering to remove a baseline component.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Evanisko whose telephone number is 571 272 4945. The examiner can normally be reached on M-F 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 571 272 4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

George R Evanisko  
Primary Examiner  
Art Unit 3762

10/11/6

GRE  
September 30, 2006